



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,686	11/27/2001	Toshinori Tanaka	Q66753	7302

7590 05/23/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 Pennsylvania, N.W.  
Washington, DC 20037

EXAMINER

IE, DANG D

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/993,686	TANAKA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dang D Le	2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1101</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. Figures 6-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3, 5, 7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruhn in view of the applicant's admitted of prior art (Figures 6-10).

Regarding claim 1, Bruhn shows a brush assembly comprising:

- A brush having three or more tapered contact portions (14, 15) which are in contact with a surface of a commutator fixedly secured to a shaft, and
- A lead wire (2) having a tip end portion thereof embedded in said brush,
- Wherein said brush is press-molded in a pressing direction, and the contact portions of said brush are disposed at opposite edges of said brush in said pressing direction and at an intermediate portion between said opposite edges, and the tip end portion of said lead wire is inserted into said brush in said pressing direction so as to extend up to a location or farther therefrom corresponding to a second one of said contact portions counted from a lead wire inserting side of said brush.

Bruhn does not show the brush being press-molded in a pressing direction perpendicular to a normal of the surface of said commutator.

The applicant's admitted of prior art (Figures 6-10) shows said brush being press-molded in a pressing direction perpendicular to a normal of the surface of said commutator for the purpose of reducing electric resistance.

Since Bruhn and the applicant's admitted of prior art are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to press mold the brush in the mentioned direction as taught by the applicant's admitted of prior art for the purpose discussed above.

Regarding claims 3, 5, 9, and 11, it is noted that Bruhn and the applicant's admitted of prior art also show all of the limitations of the claimed invention.

Regarding claim 7, it is noted that although neither Bruhn nor the applicant's admitted of prior art discloses the amount of copper in the brush. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the brush with 30 to 70 percent weight of copper, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

5. Claims 2, 4, 6, 8, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruhn in view of the applicant's admitted of prior art (Figures 6-10) and further in view of Kerlin et al.

Regarding claim 2, Bruhn shows a brush assembly comprising:

- A brush having two tapered contact portions (14, 15) which are in contact with a surface of a commutator fixedly secured to a shaft, and
- A lead wire (2) having a tip end portion thereof embedded in said brush.

Bruhn does not show said brush being press-molded in a pressing direction perpendicular to a normal of the surface of said commutator, and the contact portions of said brush are disposed at opposite edges of said brush in said pressing direction, and

the tip end portion of said lead wire is inserted into said brush in said pressing direction so as to extend over two thirds or more of the length of said brush in said pressing direction.

The applicant's admitted of prior art (Figures 6-10) shows said brush being press-molded in a pressing direction perpendicular to a normal of the surface of said commutator for the purpose of reducing electric resistance.

Kerlin et al. show the tip end portion of the lead wire (3) inserted into said brush so as to extend over two thirds or more of the length of said brush in said pressing direction for the same purpose.

Since Bruhn, the applicant's admitted of prior art, and Kerlin et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to press mold the brush in the mentioned direction as taught by the applicant's admitted of prior art and to extend the tip end of the lead wire over two thirds or more of the length of the brush as taught by Kerlin et al. for the purpose discussed above.

Regarding claims 4, 6, 10, and 12, it is noted that Bruhn and the applicant's admitted of prior art also show all of the limitations of the claimed invention.

Regarding claim 8, it is noted that although neither Bruhn, the applicant's admitted of prior art, nor Kerlin et al. discloses the amount of copper in the brush. It would have been obvious to one having ordinary skill in the art at the time the invention

Application/Control Number: 09/993,686  
Art Unit: 2834

Page 6

was made to make the brush with 30 to 70 percent weight of copper, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

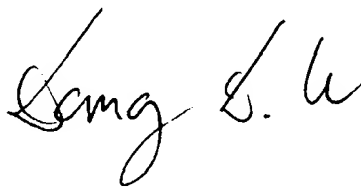
***Information on How to Contact USPTO***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

May 20, 2003



**DANG LE  
PRIMARY EXAMINER**